

CLAIMS

We claim:

1 1. A method of managing performance of a grid job on a grid
2 computer of a computing grid, comprising:

3 creating a file of at least one job performance factor
4 governing performance of grid jobs on a particular grid computer;
5 and

6 performing the grid job on the grid computer in conformance
7 with each job performance factor for the grid computer.

1 2. The method of claim 1 wherein creating the file of at least
2 one job performance factor includes storing the file on the grid
3 computer to which the job performance factors apply.

1 3. The method of claim 1 additionally including reporting the
2 file of the at least one job performance factor to a grid manager
3 that assigns grid jobs to grid computers of the computing grid.

1 4. The method of claim 1 additionally including accessing the
2 file of at least one job performance factor of one of the grid
3 computers before assigning a grid job to the grid computer.

1 5. The method of claim 4 additionally including assigning a
2 grid job to a grid computer based upon the at least one job
3 performance factor in the file.

1 6. The method of claim 1 wherein the at least one job
2 performance factor includes an amount of processor time utilization
3 to reserve for processing local jobs on the grid computer.

1 7. The method of claim 1 wherein the at least one job
2 performance factor includes an operating time window for
3 performing grid jobs on the grid computer.

1 8. The method of claim 1 wherein the at least one job
2 performance factor for one of the grid computers is different than
3 at least one job performance factor for another one of the grid
4 computers.

1 9. The method of claim 1 wherein creating the file
2 additionally comprises including at least one local operating
3 condition for the grid computer in the file, and wherein the at least
4 one local operating condition recorded in the file comprises an
5 indication of at least one time period of optimal electricity rate for
6 operating the grid computer.

1 10. The method of claim 1 wherein creating the file
2 additionally comprises including at least one local operating
3 condition for the grid computer in the file, and wherein the at least
4 one local operating condition recorded in the file comprises an
5 indication of any virus alerts for the grid computer.

1 11. A method of monitoring status of a grid job on a
2 computing grid including at least two grid computers, comprising
3 forming a grid job for being performed by at least one grid
4 computer;
5 creating a job performance file based on the grid job; and
6 sending the job performance file with the grid job to one of
7 the grid computers.

1 12. The method of claim 11 wherein the job performance file
2 includes at least one milestone to be reached in performing the grid
3 job before completion, and additionally including reporting to a
4 grid manager by the grid computer when each milestone is reached.

1 13. The method of claim 12 wherein the job performance file
2 includes at least one expected time period for each milestone in
3 which the milestone is expected to be achieved.

1 14. The method of claim 12 additionally including dividing a
2 data set for the grid job into at least two portions, sending a first
3 portion of a data set with the grid job to one of the grid computers
4 for being processed on the grid computer, and sending a second
5 portion of the data to the grid computer when the grid computer
6 reports the achievement of one of the milestones.

1 15. The method of claim 11 wherein the job performance file
2 includes at least one deadline for reporting status of the
3 performance of the grid job to a grid manager, and additionally
4 including reporting to the grid manager by the grid computer when
5 each deadline is reached.

1 16. The method of claim 15 additionally including assigning
2 the grid job to at least one other grid computer if the grid computer
3 does not report to the grid manager by the at least one deadline.

1 17. The method of claim 11 wherein the job performance file
2 includes at least one milestone to be reached in performing the grid
3 job before completion and at least one deadline for reporting status
4 of the performance of the grid job to the grid manager, and
5 additionally including reporting to a grid manager by the grid
6 computer when each deadline occurs regardless of whether the at
7 least one milestone has been reached.

1 18. The method of claim 11 wherein the job performance file
2 includes a relative priority for performing the grid job, and
3 additionally including performing by the grid computer a grid job
4 having a relatively higher priority before a grid job having a
5 relatively lower priority.

1 19. The method of claim 13 wherein reporting to the grid
2 manager additionally includes initiating a network connection
3 between the grid computer and a grid manager computer when a
4 network connection is not active and transmitting the report over
5 the network connection.

1 20. The method of claim 12 wherein reporting to the grid
2 manager additionally includes reporting a level of availability of
3 resources of the grid computer to the grid manager.